



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,117	04/09/2004	Neil H. Akkerman	018219/00002	1718
22904	7590	04/11/2006	EXAMINER	
LOCKE LIDDELL & SAPP LLP 600 TRAVIS 3400 CHASE TOWER HOUSTON, TX 77002-3095			KIRKLAND III, FREDDIE	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/822,117

Applicant(s)

AKKERMAN ET AL.

Examiner

Freddie Kirkland III

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

FINAL ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Malchow U.S. Patent 3,903,738.

With respect to claim 1, Malchow teaches a system for mounting an engine comprising a first and second bearings (i.e. bushings) each connectable to the frame and the engine to form a pivotal axis about which said engine is free to rotate relative to said frame (col. 2 lines 10-20, figure 2), said pivotal axis passing near the center of gravity of the engine and aligned other than orthogonally to the axis of the engine output shaft (figure 2, major principal axis passed through the center of gravity as shown in the figure and is not orthogonal to the output shaft 60), and a load sensing transducer including parts connectable to said frame and said engine for resisting and measuring rotational forces between said engine and said frame about said pivotal axis (col. 2 lines 39-43, one of the front engine mounts is replaced with a force transducer in order to measure torque acting on the engine), said load sensing transducer having an axis of sensitivity on a plane other than any plane which includes the pivotal axis (figures 1 and 2).

With respect to claims 2, 10, 18 and 26, Malchow teaches said load sensing transducer measures rotational forces in only one direction (col. 1 lines 41-45, the force transducer measures compressive force not bending force in reaction to engine torque to provide a linear force characteristic of the engine and transmission).

With respect to claims 3, 11, 19, and 27, Malchow teaches the first and second bearings are connectable to forward and rearward portions of the frame and engine and are in axial alignment to receive shaft portions on the pivotal axis at opposite ends of the engine (col. 2 lines 22-30, figure 2).

With respect to claims 4, 12, 20 and 28, Malchow teaches one of the bearings comprises bearing segments, each connectable to the engine and frame (col. 2 lines 48-53).

With respect to claims 5, 13, 21, and 29, Malchow teaches the bearing segments each having a first part guidably moveable with respect to a second part form a pivotal point on the pivotal axis (col. 2 lines 61-67, figure 6, pivot pin 36).

With respect to claims 6, 14, 22, and 30, Malchow teaches one of said parts contains a rolling element guidably moveable in a slot in the other part (col. 2 lines 61-67, figures 4 and 6).

With respect to claims 7, 15, 23, and 31, Malchow teaches wherein the other of said bearings comprises a compliant engine mount (col. 2 lines 10-12, rear mount 18).

With respect to claims 8, 16, 24, and 32 the reference teaches, the pivotal axis extends through the center of gravity (figure 2, major principal axis).

With respect to claim 9, Malchow teaches a system for mounting an engine comprising a first and second bearings (i.e. bushings) each connectable to the frame and the engine to form a pivotal axis about which said engine is free to rotate relative to said frame (col. 2 lines 10-20, figure 2), said pivotal axis aligned other than orthogonally to the axis of the engine output shaft, and so positioned that a conical volume formed by the center of one bearing and the circle defined by the surfaces of relative motion of the other bearing contains the center of gravity of the engine (figures 1 and 2), and a load sensing transducer including parts connectable to said frame and said engine for resisting and measuring rotational forces between said engine and said frame about said pivotal axis (col. 2 lines 39-43, one of the front engine mounts is replaced with a force transducer in order to measure torque acting on the engine), said load sensing transducer having an axis of sensitivity on a plane other than any plane which includes the pivotal axis (figures 1 and 2).

With respect to claim 17, Malchow teaches a system for mounting an engine comprising a first and second bearings (i.e. bushings) each connectable to the frame and the engine to form a pivotal axis about which said engine is free to rotate relative to said frame (col. 2 lines 10-20, figure 2), said pivotal axis aligned other than orthogonally to the axis of the engine output shaft (figure 1), and at least one of said bearings having rolling elements between the engine and frame (col. 2 lines 10-20 and lines 25-30, the engine mounts contain rolling elements that provide a roll rate), and a load sensing transducer including parts connectable to said frame and said engine for resisting and measuring rotational forces between said engine and said frame about said pivotal axis

Art Unit: 2855

(col. 2 lines 39-43, one of the front engine mounts is replaced with a force transducer in order to measure torque acting on the engine), said load sensing transducer having an axis of sensitivity on a plane other than any plane which includes the pivotal axis (figures 1 and 2).

With respect to claim 25, Malchow teaches a system for mounting an engine comprising a first and second bearings (i.e. bushings) each connectable to the frame and the engine to form a pivotal axis about which said engine is free to rotate relative to said frame (col. 2 lines 10-20, figure 2), said pivotal axis aligned other than orthogonally to the axis of the engine output shaft (figure 1), and one of said bearing having a pivotal point outside of the space between the surfaces of relative motion of said one bearing (col.2 lines 61-67, figures 4-6), and a load sensing transducer including parts connectable to said frame and said engine for resisting and measuring rotational forces between said engine and said frame about said pivotal axis (col. 2 lines 39-43, one of the front engine mounts is replaced with a force transducer in order to measure torque acting on the engine), said load sensing transducer having an axis of sensitivity on a plane other than any plane which includes the pivotal axis (figures 1 and 2).

Response to Arguments

Applicant's arguments filed 1/25/2006 have been fully considered but they are not persuasive.

With regards to claim 1, the applicant argues that one of the most notable differences (between Malchow and the applicants invention) is that the subject invention discloses an engine mounting system whereby the pivotal axis of the engine passes

Art Unit: 2855

near the center of gravity of the engine. Malchow does in fact teach an engine mounting system where the pivotal axis (major principal axis) that passes near the center of gravity of the engine (figure 2). The applicant also argues that Malchow doesn't teach an engine mounting system that allows for torque measurement in on-road driving applications, rather than just controlled testing situations. Malchow does state that one of the engine mounts can be replaced temporarily with a torque sensing mount in order to measure strain on the engine. Given that Malchow does state that a load transducer is used for measuring forces between the engine and the frame (col.2 lines 4-30), it meets the claimed limitations by the applicant since the applicant. In addition, fails to state in the claims, that torque is measured more than temporarily.

With regards to claim 9, the applicant argues the conical volume formed by the center of one of these bearings and the circle defined by the surfaces of relative motion of the other bearing does not contain the center of gravity of the engine. Malchow does in fact disclose the conical volume formed above (figures 1 and 2). The applicant fails to point out the conical volume encompassed by the cited limitation and how this structure patentably distinguishes of Malchow.

With regards to claim 17, the applicant argues that the elastomeric material of the traditional engine mount of Malchow is structurally and functionally different from the rolling elements of the subject invention. Also the applicant argues that the elastomeric material of Malchow being of a different shape and material from the rolling elements of the present invention, and is designed to resist engine roll. First, the applicant fails to claim any limitation regarding the shape and material of the rolling elements. Second,

Art Unit: 2855

Malchow states that the elastomeric materials does resist engine roll in shear to provide a soft roll rate (col. 2 lines 28-30). Therefore the rolling elements taught by Malchow do allow rolling of the engine.

With regards to claim 25, the applicant argues the pivotal points of each of these "bearings" are not outside the space between the surfaces of relative motion of said "bearing" as required by claim 25. Malchow does teach wherein one of said bearing having a pivotal point outside of the space between the surfaces of relative motion of said one bearing (col.2 lines 4-67, figures 4-6). The pivotal point currently claimed by the applicant can be read as any space outside the space of relative motion. The applicant fails to point out the pivotal point encompassed by the cited limitation and how this structure patentably distinguishes of Malchow.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2855


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freddie Kirkland III whose telephone number is 571-272-2232. The examiner can normally be reached on Monday through Friday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FKIII

4/4/06


EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800